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10/608,887	06/26/2003	Eran Steinberg	FN-102B-US	7820

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EXAMINER	
YODER III, CHRISS S	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/608,887	STEINBERG ET AL.	
	Examiner	Art Unit	
	CHRISS S. YODER III	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

New Examiner of Record

The prosecution of this application has been transferred to Examiner Chriss S. Yoder, III from the docket of Examiner Gregory V. Madden. Any inquiry concerning this Office Action or earlier communications should be directed to the current Examiner of record. Current contact information is provided in the last section of this communication.

Response to Arguments

Applicant's arguments with respect to claims 1-44 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

The indicated allowability of claims 8 and 30 is withdrawn in view of the newly discovered reference(s) to Hagiwara et al. (U.S. Pat. 6,816,611). Rejections based on the newly cited reference(s) follow.

Claim Objections

Claims 22 and 44 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. All of the

limitations recited in claims 22 and 44 are found in claims 21 and 43, from which they depend, respectively.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15 recites the limitation "removing identification of one or more of said plurality of groups" in line 13. There is insufficient antecedent basis for this limitation in the claim. The Examiner believes this should read "removing identification of said group". For purposes of examination, the claim will be examined as understood by the Examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-11, 13-19, 21-33, 35-41, and 43-44 rejected under 35 U.S.C. 103(a) as being unpatentable over Needham et al. (U.S. Pub. 2002/0181801) in view of Hagiwara et al. (U.S. Pat. 6,816,611).

2. In regard to **claim 1**, the Needham reference teaches within a digital acquisition device, a method of enhancing parameters of a digital image as part of a post-image

capture process using face detection (via automatic feature detection unit 250) within the captured image to achieve one or more desired image parameters, the method comprising determining default values of relative exposure (stored as correction parameters 240) of at least some portion of the digital image, determining the values of one or more camera acquisition parameters (i.e. overall contrast or brightness of the input image), identifying a plurality of groups of pixels that correspond to an image of a face within a digitally-captured image (via automatic feature detection unit 250), and determining values corresponding to relative exposure of the group of pixels (i.e. contrast or brightness of the detected face), comparing one or more default values of relative exposure with one or more captured values of relative exposure based upon analysis of the image of the face (in feature-based correction unit 270), and adjusting (via feature-based correction unit 270) in a post-image capture process the image parameters including adjusting the values of relative exposure (i.e. contrast and/or brightness) of the face. Please refer to Figs. 2, 4, 5, and 7, and Paras. [0015-0034]. Therefore, it can be seen that Needham fails to disclose removing identification of one or more of said plurality of groups of pixels as corresponding respectively to one or more images of one or more faces, and wherein the removing being performed by increasing a sensitivity level of said face identifying.

In analogous art, Hagiwara discloses a facial detection method that removes identification of one or more of said plurality of groups of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying (column 13, line 40 – column 14, line 22). Hagiwara teaches that

the removal of identification of one or more of said plurality of groups of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying is preferred in order to avoid any wasteful search process and achieve high-speed processing (column 14, lines 9-17). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Needham device to remove identification of one or more of said plurality of groups of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying in order to avoid any wasteful search process and achieve high-speed processing, as suggested by Hagiwara.

3. Considering **claims 2-3**, the limitations of claim 1 are set forth above, and while Needham and Hagiwara discloses that the method is performed using a digital camera, neither reference specifically states that the digital camera can be a digital still camera or a digital video camera. However, Official Notice is hereby taken that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the above method in either a digital still camera or a digital video camera. One would have been motivated to do so because the method of adjusting image parameters of a detected face in a post-image capture process would be identical in both a digital still camera and a digital video camera, wherein the only difference would be the speed of processing required. Thus, the final image output to the user would be optimized, regardless of the type of camera (still or video) used.

4. In regard to **claim 4**, the limitations of claim 1 are set forth above by Needham, and the Needham reference further teaches that the method comprises determining and

adjusting one or more values of relative exposure (i.e. contrast and brightness) of the face. See Paras. [0017-0021].

5. In regard to **claim 5**, the Needham reference teaches within a digital acquisition device, a method of enhancing parameters of a digital image as part of a post-image capture process using face detection (via automatic feature detection unit 250) within the captured image to achieve one or more desired image parameters, the method comprising determining default values of one or more image attributes (stored as correction parameters 240) of at least some portion of the digital image, determining the values of one or more camera acquisition parameters (i.e. overall contrast or brightness of the input image), identifying a plurality of groups of pixels that correspond to an image of a face within a digitally- captured image (via automatic feature detection unit 250), and determining values corresponding to image attributes of the group of pixels (i.e. contrast or brightness of the detected face), comparing one or more default image attribute values with one or more captured image attribute values based upon analysis of the image of the face (in feature-based correction unit 270), and adjusting (via feature-based correction unit 270) in a post-image capture process the image parameters including adjusting the image attribute values (i.e. contrast and/or brightness) of the face, wherein the identifying of face pixels is automatically performed by an image processing apparatus (automatic feature detection unit250). Please refer to Figs. 2, 4, 5, and 7, and Paras. [0015-0034]. What Needham fails to show, however, is that the method further comprises manually removing identification of one or more of the plurality of groups of pixels as corresponding respectively to one or more images of

one or more faces, and wherein multiple groups of pixels that correspond respectively to multiple images of faces within the digital-captured image remain identified after the removing.

However, noting the Hagiwara reference, Hagiwara teaches that multiple face image areas are automatically detected (figure 17), and that the user can manually remove a face as a detected face for further processing (column 13, line 40 – column 14, line 22, the users adjustment of the detection thresholds is considered to manually add or remove identified faces). Hagiwara teaches that the removal of identification of said group of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying is preferred in order to avoid any wasteful search process and achieve high-speed processing (column 14, lines 9-17). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Needham device to remove identification of said group of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying in order to avoid any wasteful search process and achieve high-speed processing, as suggested by Hagiwara.

Additionally, through the combination of Needham and Hagiwara, the method further comprising performing automated processing of the remaining multiple groups of pixels corresponding to the multiple images of faces including adjusting in a post-image capture process values of one or more parameters of each of said multiple remaining faces (it is considered that Needham would only process the remaining faces after the selection process of Hagiwara).

6. In regard to **claim 6**, the limitations of claim 5 are taught above, and while neither Needham nor Hagiwara expressly state that the method of manually removing a detected face is performed in response to false detection of regions as faces, Official Notice is hereby taken that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have manually removed regions falsely detected as faces, as the user would not want the post-processing adjustment of image attributes completed on objects mistakenly detected as faces. Thus, the automatic detection of faces is not solely relied upon to perform the adjustment of image attributes of particular regions of an image, thereby allowing the user to have more control over the outcome of the final image.

7. In regard to **claim 7**, again the limitations of claim 5 are taught above, and the Hagiwara reference discloses that the manual removal of one or more detected faces is performed in response to a determination to concentrate on less of the image faces than faces identified in the identifying (column 13, line 40 – column 14, line 22, the user can adjust the threshold of the number of identified faces).

8. In regard to **claim 8**, the Needham reference teaches within a digital acquisition device, a method of enhancing parameters of a digital image as part of a post-image capture process using face detection (via automatic feature detection unit 250) within the captured image to achieve one or more desired image parameters, the method comprising determining default values of one or more image attributes (stored as correction parameters 240) of at least some portion of the digital image, determining the values of one or more camera acquisition parameters (i.e. overall contrast or brightness

of the input image), identifying a plurality of groups of pixels that correspond to an image of a face within a digitally- captured image (via automatic feature detection unit 250), and determining values corresponding to image attributes of the group of pixels (i.e. contrast or brightness of the detected face), comparing one or more default image attribute values with one or more captured image attribute values based upon analysis of the image of the face (in feature-based correction unit 270), and adjusting (via feature-based correction unit 270) in a post-image capture process the image parameters including adjusting the image attribute values (i.e. contrast and/or brightness) of the face, wherein the identifying of face pixels is automatically performed by an image processing apparatus (automatic feature detection unit250). Please refer to Figs. 2, 4, 5, and 7, and Paras. [0015-0034]. What Needham fails to show, however, is that the method further comprises manually removing one or more of the plurality of groups of pixels that correspond to said image of said face, wherein the method of removing one or more faces is being performed by increasing a sensitivity level of said face identifying.

In analogous art, Hagiwara discloses a facial detection method that manually removes identification of one or more of said plurality of groups of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying (column 13, line 40 – column 14, line 22, the users adjustment of the detection thresholds is considered to manually add or remove identified faces). Hagiwara teaches that the removal of identification of one or more of said plurality of groups of pixels as corresponding respectively to one or more images of

one or more faces by increasing a sensitivity level of said face identifying is preferred in order to avoid any wasteful search process and achieve high-speed processing (column 14, lines 9-17). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Needham device to remove identification of one or more of said plurality of groups of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying in order to avoid any wasteful search process and achieve high-speed processing, as suggested by Hagiwara.

9. In regard to **claim 9**, the limitations of claim 5 are taught above, and Hagiwara teaches that the method of manually removing a detected face is performed by an interactive visual method (column 13, line 40 – column 14, line 22, the users adjustment of the detection thresholds is considered to manually add or remove identified faces).

10. In regard to **claim 10**, again the limitations of claim 5 are taught above, and while neither Needham nor Hagiwara expressly state that the method is performed using an image acquisition built-in display, Official Notice is hereby taken that the concepts and advantages of using an image acquisition built-in display are notoriously well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an image acquisition built-in display in order to allow the user to correct the image immediately after image capture without the use of a computer.

11. In regard to **claim 11**, Hagiwara discloses manually adding an indication of another face within the image (column 13, line 40 – column 14, line 22, the users

adjustment of the detection thresholds is considered to manually add or remove identified faces).

12. In regard to **claim 13**, the Needham reference teaches within a digital acquisition device, a method of enhancing parameters of a digital image as part of a post-image capture process using face detection (via automatic feature detection unit 250) within the captured image to achieve one or more desired image parameters, the method comprising determining default values of relative exposure (stored as correction parameters 240) of at least some portion of the digital image, determining the values of one or more camera acquisition parameters (i.e. overall contrast or brightness of the input image), identifying a plurality of groups of pixels that correspond to an image of a face within a digitally-captured image (via automatic feature detection unit 250), and determining values corresponding to relative exposure of the group of pixels (i.e. contrast or brightness of the detected face), comparing one or more default values of relative exposure with one or more captured values of relative exposure based upon analysis of the image of the face (in feature-based correction unit 270), and adjusting (via feature-based correction unit 270) in a post-image capture process the image parameters including adjusting the values of relative exposure (i.e. contrast and/or brightness) of the face. Please refer to Figs. 2, 4, 5, and 7, and Paras. [0015-0034], wherein the identifying of face pixels is automatically performed by an image processing apparatus (automatic feature detection unit 250) which receives a relative value (feature weight 230) as to the estimated importance of the detected regions that are identified as faces within the digitally-captured image, as is disclosed in Para. [0024]. Therefore, it

can be seen that Needham fails to disclose that the relative values received for identifying the face pixels are different.

In analogous art, Hagiwara discloses using different relative values for the identification of face pixels (column 13, line 40 – column 14, line 22). Hagiwara teaches that using different values (i.e. thresholds) for face identifying is preferred in order to avoid any wasteful search process and achieve high-speed processing (column 14, lines 9-17). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Needham device to use different values for facial pixel identification in order to avoid any wasteful search process and achieve high-speed processing, as suggested by Hagiwara.

13. In regard to **claim 14**, note Hagiwara discloses that the relative value of the estimated importance of the different detected region can be manually modified (column 13, line 40 – column 14, line 22, the users adjustment of the detection thresholds is considered to manually add or remove identified faces).

14. In regard to **claim 15**, the Needham reference discloses a method of digital image processing using face detection (via automatic feature detection unit 250) to achieve a desired image parameter, the method comprising identifying a group of pixels that correspond to an image of a face within a digitally-detected image (via automatic feature detection unit 250), determining initial values of relative exposure (i.e. contrast or brightness) of at least some of the pixels, determining an initial relative exposure of the digitally-detected image of the face based on the initial values, and automatically adjusting (via feature-based correction unit 270) values of relative exposure of pixels

within the digitally- detected image of the face based upon comparison of the initial relative exposure of the face with a desired relative exposure (from correction specification unit 210) of the face. Please refer again to Figs. 2, 4, 5, and 7, and Paras. [0015-0034]. Therefore, it can be seen that Needham fails to disclose removing identification of said group of pixels as corresponding respectively to one or more images of one or more faces, and wherein the removing being performed by increasing a sensitivity level of said face identifying.

In analogous art, Hagiwara discloses a facial detection method that removes identification of said group of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying (column 13, line 40 – column 14, line 22). Hagiwara teaches that the removal of identification of said group of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying is preferred in order to avoid any wasteful search process and achieve high-speed processing (column 14, lines 9-17). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Needham device to remove identification of said group of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying in order to avoid any wasteful search process and achieve high-speed processing, as suggested by Hagiwara.

15. In regard to **claim 16**, the limitations of claim 15 are taught above, and Needham further teaches that the method is performed within a digital camera, as taught in Paras. [0016] and [0025].

16. In regard to **claim 17**, the limitations of claim 16 are taught by Needham above, and the Needham reference further discloses that the method comprises determining one or more initial values of relative exposure of the face, and adjusting one or more values of relative exposure (i.e. contrast and/or brightness) of the face. See Paras. [0015-0034].

17. In regard to **claim 18**, the limitations of claim 16 are taught above by Needham in view of Hagiwara, and while Hagiwara does teach manually removing indication of another face (column 13, line 40 – column 14, line 22, the users adjustment of the detection thresholds is considered to manually add or remove identified faces), the primary reference does not expressly state that the method of manually removing a detected face is performed in response to false indication of a face, Official Notice is hereby taken that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have manually removed regions falsely detected as faces, as the user would not want the post-processing adjustment of image attributes completed on objects mistakenly detected as faces. Thus, the automatic detection of faces is not solely relied upon to perform the adjustment of image attributes of particular regions of an image, thereby allowing the user to have more control over the outcome of the final image.

18. In regard to **claim 19**, note Hagiwara discloses manually adding an indication of another face within the image (column 13, line 40 – column 14, line 22, the users adjustment of the detection thresholds is considered to manually add or remove identified faces).

19. In regard to **claim 21**, the Needham reference discloses a method of digital image processing using face detection (via automatic feature detection unit 250) to achieve a desired image parameter, the method comprising identifying a group of pixels that correspond to an image of a face within a digitally-detected image (via automatic feature detection unit 250), determining initial values of relative exposure (i.e. contrast or brightness) of at least some of the pixels, determining an initial relative exposure of the digitally-detected image of the face based on the initial values, and automatically adjusting (via feature-based correction unit 270) values of relative exposure of pixels within the digitally-detected image of the face based upon comparison of the initial relative exposure of the face with a desired relative exposure (from correction specification unit 210) of the face. Please refer again to Figs. 2, 4, 5, and 7, and Paras. [0015-0034]. What Needham fails to show, however, is that the method further comprises manually adding an indication of another face within the image, and wherein multiple groups of pixels corresponding to multiple images of faces within the digital-captured image are identified after the adding.

However, noting the Hagiwara reference, Hagiwara teaches that multiple face image areas are automatically detected (figure 17), and that the user can manually add/remove a face as a detected face for further processing (column 13, line 40 –

column 14, line 22, the users adjustment of the detection thresholds is considered to manually add or remove identified faces). Hagiwara teaches that the addition/removal of identification of said group of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying is preferred in order to avoid any wasteful search process and achieve high-speed processing (column 14, lines 9-17). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Needham device to add/remove identification of said group of pixels as corresponding respectively to one or more images of one or more faces by increasing a sensitivity level of said face identifying in order to avoid any wasteful search process and achieve high-speed processing, as suggested by Hagiwara.

Additionally, through the combination of Needham and Hagiwara, the method further comprises performing automated processing of the multiple groups of pixels corresponding to the multiple images of faces including adjusting in a post-image capture process one or more values of one or more parameters of the multiple faces (it is considered that Needham would only process the remaining faces after the selection process of Hagiwara).

20. In regard to **claim 22**, note Hagiwara discloses manually adding an indication of another face within the image (column 13, line 40 – column 14, line 22, the users adjustment of the detection thresholds is considered to manually add or remove identified faces).

21. In regard to **claims 23-26 and 33**, these are directed toward a processor readable storage device having processor readable code embodied thereon, corresponding to the method of claims 1-3, 4, and 11, respectively. Therefore, claims 23-26 and 33 have been analyzed and rejected as previously discussed with respect claims 1-3, 4, and 11.

22. In regard to **claims 27-29 and 31-32**, these are directed toward a processor readable storage device having processor readable code embodied thereon, corresponding to the method of claims 5-7 and 9-10, respectively. Therefore, claims 27-29 and 31-32 have been analyzed and rejected as previously discussed with respect claims 5-7 and 9-10.

23. In regard to **claim 30**, this is directed toward a processor readable storage device having processor readable code embodied thereon, corresponding to the method of claim 8. Therefore, claim 30 has been analyzed and rejected as previously discussed with respect claim 8.

24. In regard to **claims 35-36**, these are directed toward a processor readable storage device having processor readable code embodied thereon, corresponding to the method of claims 13-14, respectively. Therefore, claims 35-36 have been analyzed and rejected as previously discussed with respect claims 13-14.

25. In regard to **claims 37-41**, these are directed toward a processor readable storage device having processor readable code embodied thereon, corresponding to the method of claims 15-19, respectively. Therefore, claims 37-41 have been analyzed and rejected as previously discussed with respect claims 15-19.

26. In regard to **claims 43-44**, these are directed toward a processor readable storage device having processor readable code embodied thereon, corresponding to the method of claims 21-22, respectively. Therefore, claims 43-44 have been analyzed and rejected as previously discussed with respect claims 21-22.

27. Claims 12 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Needham et al. (U.S. Pub. 2002/0181801) in view of Hagiwara et al. (U.S. Pat. 6,816,611), and further in view of Ray et al. (U.S. Pat. 6,940,545).

28. In regard to **claims 12**, the limitations of claim 1 are taught by the primary reference of Needham in view of Hagiwara above, and while Needham does teach that the identifying of face pixels is automatically performed by an image processing apparatus (automatic feature detection unit 250), the primary reference does not teach that the image processing apparatus receives a relative value as to a detection assurance. However, the Ray reference teaches a method of automatically identifying a face in image via CPU 30, wherein a relative value as to a detection assurance (referred to as Component W) is received by the image processing apparatus (CPU 30) (See Col. 7, Lines 58-62 and Col. 11, Lines 8-67). It would have been obvious to one of ordinary skill in the art to have included the relative value as to detection assurance, as taught by Ray, with the automatic detection of faces in an image, as shown by Needham in view of Hagiwara. One would have been motivated to do so because by providing a value as to detection assurance, an automatic detection unit (such as automatic feature detection unit 250 of Needham) can more accurately detect faces within an image, and will less

likely provide false positives to the user, which in turn require more manual intervention by the user to perform desired image processing.

29. In regard to **claim 34**, this is directed toward a processor readable storage device having processor readable code embodied thereon, corresponding to the method of claim 12. Therefore, claim 34 has been analyzed and rejected as previously discussed with respect claim 12.

30. Claims 20 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Needham et al. (U.S. Pub. 2002/0181801) in view of Hagiwara et al. (U.S. Pat. 6,816,611), and further in view of Kinjo (U.S. Pat. 7,106,887).

31. In regard to **claim 20**, the limitations of claim 15 are taught by the primary reference of Needham in view of Hagiwara above, and while Needham does teach that the automatic feature detection unit 250 determines one or more initial values of size of the face (See Para. [0021]), Needham fails to teach that the one or more values of size of the face are adjusted in the method. However, noting the Kinjo reference, Kinjo teaches a method of digital image processing using face detection (face extraction), wherein an initial value of size of the face is determined (in identifying a certain person in the scene), and adjusting the values of size of the face (i.e. slimming the face according to processing specific to the identified person). Please refer to Figs. 2 and 3, and Col. 8, Lines 14-17, Col. 9, Line 46 - Col. 10, Line 37, and Col. 11, Lines 3-23. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the adjusting of values of size of the face, as taught by Kinjo,

with the adjusting of image parameters of Needham in view of Hagiwara. One would have been motivated to do so because, as Kinjo teaches in Col. 1, Lines 16-21, enabling the adjustment of the values of the size of the face allows the user to alter the image to their specific preference, therefore providing a customized image to the user.

32. In regard to **claim 42**, this is directed toward a processor readable storage device having processor readable code embodied thereon, corresponding to the method of claim 20. Therefore, claim 42 has been analyzed and rejected as previously discussed with respect claim 20.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISS S. YODER III whose telephone number is (571)272-7323. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. S. Y./
Examiner, Art Unit 2622

/Tuan V Ho/
Primary Examiner, Art Unit 2622